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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,502	02/11/2002	Kimmo Narkilahti	4925-159PUS	2649

7590

08/26/2004

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 08/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,502

Applicant(s)

NARKILAHTI ET AL.

Examiner

Sharad Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the Claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various Claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each Claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knight et al. [GB 2327175] (hereinafter Knight), in view of Obhan [US 6275695] (hereinafter Obhan).

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1. Regarding Claim 1, Knight discloses a method for determining the behavior patterns of the users of a telecommunication system on the basis of information collected from the system (Pg.1; 26-35), characterized in that at least one variable or a combination of variables of the telecommunication system is defined, (Pg.3; 16-24) user-specific information corresponding to the defined at least one variable or a combination of variables is filtered from the information collected from the telecommunication system, (Pg.3; 24-34) and

Knight fails to disclose the users of the telecommunication system are classified on the basis of the filtered user-specific information. However, Obhan teaches in an analogous art, that the users of the telecommunication system are classified on the basis of the filtered user-specific information (Col.20; 5-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the users of the telecommunication system are classified on the basis of the filtered user-specific information in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

2. Regarding Claim 2, Knight discloses all the particulars of the Claim except user-specific information is filtered from the telecommunication system in real time. However, Obhan teaches in an analogous art, that a method according to Claim 1, characterized in that said user-specific information is filtered from the telecommunication system in real time. (Col.12; 50-64) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include user-specific information is filtered from the

telecommunication system in real time in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

3. Regarding Claim 3, Knight disclose a method according to Claim 1, characterized in that after said filtering of information the filtered information is saved (3; fig.1) for later analysis. (Pg.3; 20-24)

4. Regarding Claim 4, Knight disclose a method according to Claim 1, characterized in that after the classification, statistical analysis is carried out on the classified information. (8; fig.1; Pg.5; 14-24 & Pg.4; 23-29)

5. Regarding Claim 5, Knight disclose a method according to Claim 4, characterized in that parameters essential for the quality of service of the telecommunication system are regulated on the basis of said statistical analysis (Pg.4; 31-Pg.5; 4).

6. Regarding Claim 6, Knight disclose a method according to Claim 4, characterized in that on the basis of said statistical analysis, conclusions are drawn about the behaviour of a certain group of users in a telecommunication system. (Pg.5; 5-12)

7. Regarding Claim 7, Knight discloses all the particulars of the Claim except the classes of behaviour patterns used in the classification of users are defined in connection with the definition of variables. However, Obhan teaches in an analogous art, that a method according to Claim 1, characterized in that the classes of behaviour patterns used in the

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classification of users are defined in connection with the definition of variables (Col. 14; 13-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the classes of behaviour patterns used in the classification of users are defined in connection with the definition of variables in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

8. Regarding Claim 8, Knight discloses all the particulars of the Claim except the definitions of the classes of behaviour patterns used in the classification of users are changed. However, Obhan teaches in an analogous art, that a method according to Claim 1, characterized in that the definitions of the classes of behaviour patterns used in the classification of users are changed (Col. 15; 37-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the definitions of the classes of behaviour patterns used in the classification of users are changed in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

9. Regarding Claim 9, Knight discloses all the particulars of the Claim except filtered unclassified information is classified into said new classes of behaviour patterns. However, Obhan teaches in an analogous art, that a method according to Claim 8, characterized in that said filtered unclassified information is classified into said new classes of behaviour patterns (Col. 16; 6-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include filtered unclassified

information is classified into said new classes of behaviour patterns in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

10. Regarding Claim 10, Knight discloses all the particulars of the Claim except at least one of the variables is the type of contract of the user. However, Obhan teaches in an analogous art, that a method according to Claim 1, characterized in that at least one of the variables is the type of contract of the user (Col.15; 37-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include at least one of the variables is the type of contract of the user in order to provide the operation that manage use of the available spectrum according to potential use of active subscriber.

11. Regarding Claim 11, Knight discloses all the particulars of the Claim except the type of system service. However, Obhan teaches in an analogous art, that a method according to Claim 1, characterized in that at least one of the variables is the type of system service. (Col.6; 62-Col.7; 6 & Col.15; 37-44) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the type of system service in order to provide the operation that manage use of the available spectrum according to operating goal of the system operators.

12. Regarding Claim 12, Knight disclose a method according to Claim 1, characterized in that said telecommunication system is a mobile communication system (1; fig.1; Pg.1; 7-10)

13. Regarding Claim 13, Knight discloses a system for determining the users' patterns of behaviour in a telecommunication system (Pg.1; 26-35), characterized in that said system comprises;

at least means for defining at least one variable or a combination of variables of the telecommunication system(Pg.3; 16-24)

filtering means for filtering said user-specific information corresponding to at least one variable or a combination of variables from the information received from the telecommunication system, (Pg.3; 24-34) and

Knight fails to disclose classifying means for classifying the users of the telecommunication system on the basis of said filtered user-specific information. However, Obhan teaches in an analogous art, that classifying means for classifying the users of the telecommunication system on the basis of said filtered user-specific information (Col.20; 5-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to classifying means for classifying the users of the telecommunication system on the basis of said filtered user-specific information in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

14. Regarding Claim 14, Knight discloses all the particulars of the Claim except user-specific information is filtered from the telecommunication system in real time. However, Obhan teaches in an analogous art, that a system according to Claim 13, characterized in that the system is designed to process the information received from the

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telecommunication system in real time. (Col.12; 50-64) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include user-specific information is filtered from the telecommunication system in real time in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

15. Regarding Claim 15, Knight disclose a system according to Claim 13, characterized in that the system has a memory (3; fig.1) for saving said filtered user-specific information. (Pg.3; 20-24)

16. Regarding Claim 16, Knight discloses all the particulars of the Claim except filtered unclassified information is classified into said new classes of behaviour patterns. However, Obhan teaches in an analogous art, that a system according to Claim 13, characterized in that the system has analysis means for statistical analysis of the classification of the behaviour patterns of users received from the classifying means and/or for defining new classes of behaviour patterns (Col.16; 6-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include filtered unclassified information is classified into said new classes of behaviour patterns in order to provide the operation that manage use of the available spectrum according to real time use of active subscriber.

17. Regarding Claim 17, Knight disclose a system according to Claim 13, characterized in that the system has regulating means for regulating the values of parameters essential

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for the quality of service of the telecommunication system on the basis of the information received from the analysis means. (Pg.1; 26-35 & Pg.2; 9-18)


18. Regarding Claim 18, Knight disclose a system according to Claim 13, characterized in that said telecommunication system is a mobile communication system (1; fig.1; Pg.1; 7-10)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Fri. (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad Rampuria
August 19, 2004


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
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